

BULLETIN OF MISCELLANEOUS INFORMATION

No. 7 1939

ROYAL BOTANIC GARDENS, KEW

XL—PROPOSED ADDITIONS AND AMENDMENTS TO THE INTERNATIONAL RULES OF BOTANICAL NOMENCLATURE.

The various proposals printed below have been contributed by the following botanists :

H. K. Airy-Shaw (No. 5).

H. K. Airy-Shaw and B. L. Burtt (Nos. 1, 11, 20).

B. L. Burtt (No. 26).

M. L. Green (Nos. 18, 22, 24).

R. Melville (Nos. 9, 10).

J. R. Sealy (No. 27).

T. A. Sprague (Nos. 2, 3, 4, 6, 7, 8, 12, 13, 14, 15, 16, 17, 19, 21, 23).

W. T. Stearn (No. 28).

E. M. Wakefield (No. 25).

Responsibility for the separate proposals rests solely with their authors. They are published together merely for the sake of convenience. Many of the proposals consist of purely textual amendments, designed to make the wording of the provisions concerned clearer and more consistent. Others are designed to remove possible ambiguity in interpretation. No major change is included, the object of all the proposals being to make the present International Rules a more efficient working instrument.

T. A. S.

(1) ART. 5. "In the absence of a relevant rule, or where the consequences of rules are doubtful, established custom must be followed."

Replace by :

"In the absence of a relevant rule, established custom must be followed. Where the consequences of rules are doubtful, the matter should be immediately submitted to the Executive Committee, pending whose report no nomenclatural changes should be made."

H. K. AIRY-SHAW and B. L. BURTT.

(2) ART. 13. Replace the last sentence by the following :

"Names given to groups placed in categories denoted by misplaced terms are illegitimate."

The examples to read as follows :

"Examples of misplacement of terms of categories : a form divided into varieties, a species containing genera, a genus containing families or tribes : e.g. Huth (in Engl. Bot. Jahrb. XX,

337-365: 1895) subdivided the subgenera and sections of *Delphinium* into 'tribes' (tribus), and the names *Delphinium* tribus *Involuta* Huth, tribus *Brevipedunculata* Huth, l.c. 365-368, etc. are accordingly illegitimate."

Remarks. The original wording "No classification is admissible which contains such alterations" is open to objection. It is not the *classification* into subordinated categories that is wrong, but the misapplication of the *terms* employed for those categories. If Huth, in the example cited under Art. 13, had used the terms "subsection" or "series" instead of "tribe" for the category concerned, then the names proposed by him for groups of that category would not have been ipso facto illegitimate.

T. A. SPRAGUE.

(3) ART. 21. The first phrase of the English text to read as follows:

"However, in order to avoid disadvantageous changes in the nomenclature of genera entailed by the strict application of the Rules of Nomenclature."

Remarks. The insertion of the words "in order" and "entailed" are purely textual amendments required in order to make the English text clearer. No change is required in the French and German texts.

T. A. SPRAGUE.

(4) ART. 27. Insert the following new paragraph (between the first and second ones) and example:

"Binary combinations of a specific epithet with the word *Anonymos* are illegitimate, since the word *Anonymos* is not a generic name (Art. 67 (1)). Such combinations are not taken into consideration for purposes of priority of the epithet concerned.

"Example: The binary combination, *Anonymos aquatica* Walt. Fl. Carol. 230 (1788), is illegitimate. The valid name for the species concerned is *Planera aquatica* J. F. Gmel (1791), and the date of the epithet *aquatica*, for purposes of priority, is 1791. The species must not be cited as *Planera aquatica* (Walt.) J. F. Gmel. If, however, it is desired to indicate that the epithet originated with Walter, the name may be cited as *Planera aquatica* [(Walt.)] J. F. Gmel."

Remarks. Under Art. 27 and Art. 67 (1) taken together, it seems clear that binary combinations under *Anonymos* are not legitimate names of species. As they have frequently been accepted as legitimate in the past, however, for example in Gray's New Manual of Botany, ed. 7 (1908) and Britton and Brown's Illustrated Flora of the Northern United States, ed. 2 (1913), it seems desirable to insert a special paragraph dealing with them.

Of the 45 binary combinations listed under *Anonymos* in the Index Kewensis, 42 are from Walter's Flora Caroliniana (1788). In that work Walter described, but failed to name, 28 new genera of plants, giving the "token" name *Anonymos* ("nameless") to each one, in place of a generic name. Under *Anonymos* he had 44 binary combinations, 43 for Phanerogamae and 1 for a Fungus.

The only reasons for making a special exception and treating combinations under *Anonymos* as legitimate names of species would be in order to retain the specific epithets given by Walter in his Flora and to associate them with Walter's name as author. An analysis (see p. 331) of the 43 names of Phanerogamae shows that 20 are synonyms of older names, and that 18 of Walter's epithets are still used for the species concerned, although ascribed to later authors. The specific epithet *pilosa* Walt. (Fl. Carol. 197) could not be taken up under *Liatris* as this would result in the creation of a later homonym of *Liatris pilosa* (Ait.) Willd. The identity of *Anonymos ramosa* Walt. (l.c. 198) and *A. uniflora* (l.c.) is doubtful, but both epithets were adopted by Gmelin in 1791 and may, in the absence of any obstacle, be retained when the two species are identified. Only two of Walter's epithets are lost through treating his combinations under *Anonymos* as illegitimate: *A. tinctoria* Walt. (l.c. 68) becomes *Lachnanthes tinctorum* (J. F. Gmel.) instead of *L. tinctoria*, and *A. pinnata* (l.c. 103) becomes *Petalostemum carolinense* (Lam.) instead of *P. pinnatum*. It is therefore clearly not worth while to make an exception to Art. 27 by treating binary combinations under *Anonymos* as legitimate.

T. A. SPRAGUE.

(5) ART. 28. To read :

"Epithets of subspecies, varieties, subvarieties, forms and subforms (and supplementary intercalated categories : *vide* Art. 12, second paragraph) are formed like those of species and follow them in order, beginning with those of the highest rank. When adjectival in form and not used as substantives they agree in gender with the generic name.

"The use of a binary nomenclature for subdivisions of species is illegitimate. But if a binary name is proposed by an author for a subspecies, in order to avoid name-changes the generic name is ignored and the resultant ternary combination is attributed to the original author.

"It is permissible to reduce more complicated names to ternary combinations."

"Examples: The name *Anemone alpicola*, published by Rouy and Foucaud (Fl. Fr. I, 42 : 1895) for a subspecies of *A. alpina* L., is treated as equivalent to *Anemone alpina* subsp. *alpicola* Rouy et Fouc., and should be cited as such."

Remarks. The word "illegitimate" is substituted for the undefined phrase "not admissible." The paragraph on the regularisation of subspecific binary names is suggested both by convenience and by custom. It is clearly desirable not to outlaw the numerous names of this kind employed in standard works such as Rouy and Foucaud's "Flore de France" and Nyman's "Consp. Fl. Eur." Briquet was evidently of the same opinion. In his Prodr. Fl. Corse, I, 604 (1910) for example, he attributed "*Ranunculus Ficaria* subsp. *ficariaeformis*" to Rouy et Foucaud, who published it as

" subsp. *R. ficariaeformis* F. Schultz (pro specie)." Again, Briquet, op. cit. II (I), 94 (1913), adopted *Rapistrum rugosum* subsp. *Linnaeanum* Rouy et Fouc., originally published by those authors as " subsp. *R. Linnaeanum* Boiss. et Reut. (pro specie)" (Fl. Fr. II, 73 : 1895) ; he cited *R. rugosum* subsp. *hispanicum* Thell. (1907) as a synonym, and added a footnote that Thellung's nomenclature in this instance was contrary to Internat. Rules (ed. 2) Art. 49 (=ed. 3, Art. 58). He clearly regarded the form of Rouy's subspecific names as admissible (i.e. legitimate), though irregular, and accordingly regularised them.

H. K. AIRY-SHAW.

(6) REC. XVIII. The second sentence to read as follows :

" They should adopt the epithet of the type for that subdivision if it requires a new epithet."

Add the following Note :

" Note. The customary conventional terms, *typicus*, *genuinus*, *originarius*, etc., where already used in place of epithets, should be retained for the groups concerned, unless it is proved that these groups do not include the type, in which case the terms concerned should be rejected. The conventional terms *typicus* etc. are not epithets, and cannot serve as the basis of new combinations."

In the Examples, correct "*mollissimus*" (twice) to "*mollicomus*"

Remarks. Certain botanists regard the conventional terms *typicus* etc. (applied to subdivisions of species) as epithets, and accordingly consider that they are *transferable* from one specific name to another, in the case of union of two or more species—vide Bolle in Notizbl. Bot. Gart. Berlin, XIII, 524 (1938). As such transference would lead to absurd results (a var. *typica* under a specific name of which it does not include the type), it seems desirable to state clearly in the Rules that such terms are not epithets. Dr. Bolle (l.c. 530) mentioned that in a letter to him I had agreed to his interpretation of the Rules. This was only a provisional opinion *not intended for publication*, and was published without my authorisation. On further study of the question, I agree with the views expressed by Drs. Harms, Mattfeld and Pilger (op. cit. 530).

T. A. SPRAGUE.

(7) ART. 31. Omit the words " between species of the same genus."

Remarks. The provisions of Art. 31 are of a general nature, applying to all hybrids. The amendment makes this clear.

T. A. SPRAGUE.

(8) ART. 32. To read as follows :

" The name of a bigeneric hybrid (i.e. a hybrid between species of two genera) consists of a new ' generic ' name, usually formed by a combination of the names of the parent genera, and a ' specific ' epithet. All hybrids between the same two genera bear the same ' generic ' name. As the generic characters of the parent genera may be very variously combined in these hybrids, no useful purpose

would be served by attempting to supply a 'generic' description. Hence, the 'generic' name is considered as validly published if it is effectively published with a mention of the two genera concerned."

Remarks. If Art. 31 is amended as above so as to cover all hybrids, provisions (1) and (2) in Art. 32 concerning sexual and asexual hybrids will become superfluous, though the examples should be retained.

T. A. SPRAGUE.

(9) ART. 34. To read as follows :

"When different hybrid forms of the same parentage (pleomorphic hybrids, hybrids between different forms of a collective species, segregates, back-crosses, etc.) are grouped under a binary name, they are classed under the binary name like the subdivisions of a species under that of a species (see Arts. 28, 29, 30)."

Remarks. The rule (Art. 34) in its present form is open to misinterpretation, as is evidenced by two recent publications on Black Poplars (E. Houtzagers (1937), *Het geslacht Populus*, Wageningen; G. S. Cansdale (1938), *The black poplars and their hybrids*, Oxford). The author, in each case, employs separate binary names for each of several segregates derived from the hybrid *Populus nigra* L. \times *deltoidea* Marsh., in violation of Art. 34. Direct mention of segregates and back-crosses in the rule, and reference to the rules dealing with the subdivisions of species, should prevent a recurrence of this breach of the rules.

R. MELVILLE.

(10) Insert the following Article after ART. 34 in order to provide for the nomenclature of hybrid segregates and back-crosses :

"Art. 34 bis. When it is desirable to give special names to segregates from hybrids of sexual origin and back-crosses of the F_1 , or of a segregate, with either of the parent species, they are classed as nothomorphs (nothomorpha, -ae; abbreviations, noth., nm.) under the binary names of the hybrids, in the same way as subdivisions of a species are classed under the binary names of species. Terms such as 'variety' and 'form' must not be used.

"Examples : *Populus marilandica* Bosc ex Poir. nothomorpha *erecta* (Selys-Longchamp) Melville.

P. marilandica nm. *aurea* (Henry) Melville."

Remarks. Article 34 requires that different hybrid forms of the same parentage shall be classed under the binary name of the hybrid like the subdivisions of a species under that of a species, but does not indicate clearly how this should be done. Some authors have classed hybrid segregates as "varieties" or "forms" under the binary name of the hybrid (e.g. Rehder in his "Manual of Cultivated Trees & Shrubs"). Both "variety" and "form" are being used already for subdivisions of a species and their use for other groups is therefore undesirable. Objection to such a use has been expressed by Houtzagers (*Het geslacht Populus*, 1937) who maintains that it is "taxonomically and genetically incorrect to adopt a varietal

name for a hybrid which is only a single heterozygous individual propagated asexually." His solution of the problem is to give separate binomials to different hybrid segregates of the same parentage, but this is contrary to Art. 34. The real need is for a suitable term applicable to the forms of sexual hybrids— F_1 , segregates and back-crosses. The term nothomorph (nothomorpha, -ae, derived from νόθος, nothos, a hybrid or cross-breed and μορφή, morphe, form) has been suggested by Melville (Proc. Linn. Soc. 16 Mar. 1939) for all hybrid forms of sexual origin. General adoption of this term, as provided for in the proposed rule, would obviate further trouble and facilitate the study of hybrids.

R. MELVILLE.

(11) ART. 35. Amend to read :

"Hybrids, forms and half-breeds among cultivated plants may receive fancy epithets, preferably in common language, as different as possible from the Latin epithets of species and varieties. When they can be attached to a species, a subspecies, a botanical variety or a named hybrid, the fancy epithet is appended to the scientific name.

"Examples: *Pelargonium zonale* 'Mrs. Pollock'; *Daphne Burkwoodii* [=caucasicum \times Cneorum] 'Somerset'; *Rhododendron* 'Aladdin' [=auriculatum \times Griesonianum]."

Remarks. The addition of interspecific hybrids and their forms to the categories covered by the article is suggested to avoid the necessity of giving Latin names to all the species-crosses in cultivation, which is undesirable except where the parentage has been scientifically investigated and is even then frequently unnecessary.

H. K. AIRY-SHAW and B. L. BURTT.

(12) ART. 36. Replace the words "or by distribution of these to specified representative botanical institutions" by "or by general distribution of these to important botanical institutions." Delete the footnote.

Remarks. The idea of a list of representative botanical institutions such as was suggested in Kew Bull. 1935, 89-90 was to validate the publication of important printed works not placed on sale, provided that at least 20 copies were presented to botanical institutions, one to a recognized institution in each of 20 geographical areas. As it seems impossible, under present international conditions, to reach agreement on such a list of institutions, a new wording is suggested. Alternatively, the provision conditionally validating works not placed on sale might be deleted.

T. A. SPRAGUE.

(13) ART. 37. Insert the words "(direct or indirect)" after "reference," and add the following example :

"Example. The publication of the new combination *Cymbopogon Martini* by W. Watson in Atkinson's Gazetteer N.-W. Prov. India, X, 392 (1882) is validated by the addition of the

number '309' which, as explained at the top of the same page, is the running-number of the species (*Andropogon Martini* Roxb.) in Steudel's Syn. Pl. Glum. I, 388 (1855). Although the reference to the synonym, *Andropogon Martini*, is indirect, it is perfectly unambiguous."

T. A. SPRAGUE.

(14) ART. 38, Note. Replace the word "legitimizes" by "validates the publication of."

Remarks. The names concerned may be either legitimate or illegitimate. Art. 38 does not make an illegitimate name legitimate. It merely treats the names concerned as *validly published*, whereas before the starting point for obligatory Latin diagnoses was altered to Jan. 1, 1935, such names were not validly published under the Rules and could therefore be ignored.

T. A. SPRAGUE.

(15) ART. 42, paragraph 1. Omit the words "under another name." Add the following example: "The publication of the generic name *Epipogium* R. Br. Prodr. 330, 331 (1810) is validated by Robert Brown's implicit reference to the excellent description of *Epipogum* in Gmelin, Fl. Sibir. I, 11 (1747). He attributed the name *Epipogium* to Gmelin."

Remarks. The publication of many Linnaean and post-Linnaean names is validated by references to pre-Linnaean descriptions. The omission of the words "under another name" is required in order to provide for those cases in which the post-Linnaean author adopted the *same* generic name. A detailed account of the publication of the name *Epipogium* is given in Kew Bull. 1937, 475.

T. A. SPRAGUE.

(16) ART. 43. The first phrase to read as follows:

"The publication of the name of a monotypic new genus based on a new species is validated. . . ."

Remarks. It is not the *name* which is validated, but its *publication*, as is recognized in the French version of Art. 43. The English and German texts, on the other hand, require textual amendment.

T. A. SPRAGUE.

(17) ART. 44. Omit the words "under another name."

Remarks. This omission is required in order to provide for the case of a pre-Linnaean binary specific name validly published by a post-Linnaean author with reference to the pre-Linnaean description.

T. A. SPRAGUE.

(18) Insert the following Article after Art. 49:

"ART. 49 bis. When the status of a group bearing a binary name is altered from species to hybrid or vice versa, the original author must be cited, followed by an indication of the original status in brackets.

"Examples: *Stachys ambigua* Sm. Engl. Bot. XXX, t. 2089 (1810), was published as a species. If regarded as a hybrid, it must be cited as \times *Stachys ambigua* Sm. (pro sp.). The binary name

× *Salix glaucops* Anderss. in DC. Prodr. XVI, pt. II, 281 (1868) was published as the name of a hybrid. Later, Rydberg in Bull. N.Y. Bot. Gard. I, 270 (1899) altered the status of the group to that of a species. If this view is accepted, the name must be cited as *Salix glaucops* Anderss. (pro hybr.)."

Remarks. The hybrid sign "×" is not part of the name: it is placed *before* the name (Art. 31)—see *Chronica Botanica*, V, 210 (1939). Hence the name of the author remains the same when a plant originally published as a species is treated as a variety or vice versa. In order to avoid the false impression that the original author was responsible for the new status, however, an indication of the original status must be added in brackets. M. L. GREEN.

(19) REC. XXX. Insert at the end of the first sentence: "(F. Muell. for Baron Ferdinand von Mueller, not F. v. M. or F. v. Muell.)."

Remarks. It seems desirable to supply this example in order to draw attention to the frequent non-observance of Rec. XXX in this and similar cases. T. A. SPRAGUE.

(20) REC. XXXIV. Amend to read:

"When several genera are united under one generic name, under which they are treated as subgenera or sections, the subdivision including the type of the generic name used should bear that name unaltered (e.g., *Anarrhinum* sect. *Anarrhinum*; *Hemigenia* sect. *Hemigenia*) or with a prefix (*Anthriscus* sect. *Eu-Anthriscus*) or a suffix (*Stachys* sect. *Stachyotypus*), if no earlier name is available."

Remarks. The current text might give the impression that it was unnecessary to look for earlier subdivisional names not falling into the categories mentioned, and the meaning of the final sentence is problematic.

The wording of the first phrase is altered, as it was ambiguous; the genera are kept distinct as subgenera.

H. K. AIRY-SHAW and B. L. BURTT.

(21) REC. XXXV. Amend to read:

"When several species are united under one specific name, under which they are treated as subspecies or varieties, the subdivision which includes the type of the specific epithet adopted should be designated by the same epithet unaltered, unless an earlier one is available. The customary conventional terms, *typicus*, *originarius*, *genuinus*, *verus*, *veridicus*, etc., where already used in place of epithets should, however, be retained for the groups concerned, unless it is proved that these groups do not include the type of the specific epithet, in which case the terms concerned must be rejected. Such conventional terms are not epithets and cannot serve as the basis of new combinations.

Remarks. The adoption of the specific epithet for the subdivision which includes the type makes it possible to retain that epithet when the subdivision is transferred to another species.

Experience has shown that the use of the conventional terms, *typicus*, *genuinus*, etc., is open to grave objection : in some cases they have been applied to subdivisions which do not include the type, and as shown in the remarks under Proposal (6) (Rec. XVIII) they are *not transferable* when the subdivision is transferred to another species.

T. A. SPRAGUE.

(22) ART. 70. Add the following Note :

" Note 2 bis. The use of the terminations *i* or *ae* instead of *ii* and *iae*, prescribed in Rec. XL (b) and XLI, is treated as an unintentional orthographic error which may be corrected.

Examples : *Dioscorea Lecardi* De Wild. may be corrected to *D. Lecardii*, and *Berberis Wilsonae* Hemsl. et E. H. Wils. may be corrected to *B. Wilsoniae* : the genitive forms derived from *Lecard* (m.) and *Wilson* (f.) prescribed by Rec. XL (b) and XLI are *Lecardii* and *Wilsoniae* respectively."

Remarks. The adoption of this note will enable those who loyally observe both the Rules and the Recommendations to apply Rec. XL (b) and XLI retrospectively, and so to obtain uniformity in the terminations of personal specific epithets in the genitive case. At present it is necessary to retain the original terminations of such epithets even where they are contrary to a Recommendation. This means that, in editing long lists of specific names, all those of this category have to be looked up to see whether they were originally spelt with *ii* (*iae*) or *i* (*ae*). Furthermore, the resulting want of consistency in spelling is not only a bibliographical blemish, but is a source of great trouble to horticulturists.

M. L. GREEN.

(23) ART. 70. Add the following as examples of different names : *Podantha* and *Podanthes*, *Microlepia* and *Microlepis*.

Add the following generic names as " Examples of orthographic variants " : *Asprella* and *Asperella*, *Cajan* and *Cajanus*, *Sesban* and *Sesbania*, *Parinari* and *Parinarium*, *Oxytheca* and *Oxythece*, *Kentranthus* and *Centranthus*.

Remarks. *Cajanus*, *Sesbania*, *Parinarium* and *Centranthus* were merely amended spellings of *Cajan*, *Sesban*, *Parinari* and *Kentranthus*, and are clearly orthographic variants for the purposes of Art. 70. The inclusion of these examples is desirable in order to make it clear that specific names published under *Parinarium*, for example, may be cited, *without change of author*, under *Parinari*.

T. A. SPRAGUE.

(24) REC. XL. The first sentence to read as follows :

" When a new specific or other epithet is taken from the name of a man it should be formed in the following manner (unless the personal name is already Latin or Greek, in which case the appropriate Latin genitive should be used, e.g., *Alexandri* from Alexander, *Francisci* from Franciscus, *Augusti* from Augustus, *Magni* from Magnus)."

REC. XL (b).

Delete the example of *Magnusii* from Magnus.

Remarks. It is clearly undesirable to form a new genitive for a Latin name of which a Latin genitive already exists, and this was doubtless never contemplated by the authors of Rec. XL. The textual amendment is required in order to make the position clear. The inclusion of the example *Magnusii* from *Magnus* seems to have been an error of judgment, since Magnus is a classical name.

M. L. GREEN.

(25) REC. XLIII. To read as follows :

" Specific (or other) epithets should be written with a small initial letter, except those which are derived from names of persons (substantives or adjectives) or are generic names (substantives or adjectives, whether in the nominative or in any oblique case).

" Examples : *Geranium molle*, *Rosa stylosa*, *Helleborus viridis* (descriptive epithets) ; *Ficus indica*, *Circaea lutetiana*, *Aster novibelgii* (geographical epithets) ; *Malva Tournefortiana*, *Phyteuma Halleri*, *Rosa stylosa* var. *Desvauxiana* (epithets derived from names of persons) ; *Lythrum Hyssopifolia*, *Brassica Napus*, *Puccinia Menthae* (epithets which are generic names, either in the nominative or in the genitive case). The epithet of *Phyllosticta hedericola* is written with a small initial letter, because *hedericola* is a compound word and not merely the generic name *Hedera*. Similarly the epithet of *Erysimum cheiranthoides* is a compound of the generic name *Cheiranthus* with the suffix *-oides*, and is accordingly spelt with a small initial letter."

Remarks. The expression " taken from generic names (substantives or adjectives) " has proved to be misleading, certain botanists having erroneously spelt epithets like *hedericola* with a capital initial letter on the ground that they were " taken from " a generic name, while others have spelt *Hederae* with a small initial letter on the ground that it is not a generic name, but the genitive of a generic name. The indication, after each set of epithets, whether they are descriptive, geographical, personal or generic will make the text clearer. It is not immediately obvious in the present text, for example, that *Hyssopifolia* is a former generic name.

E. M. WAKEFIELD.

APPENDIX III. 2. PHANEROGAMAE.

(26) Generic names proposed for conservation by B. L. BURTT.

(a) NAMES INVALIDATED BY EARLIER SYNONYMS.

3225 (Saxifrag.) **Brexia** *Noronha ex Thouars*, Gen. Nov. Madag. 20 (1806). Type-species : *B. madagascariensis* (Lam.) Thou. ex Ker-Gawl.

Nomen rejiciendum : *Venana* Lamarck, Ill. Gen. II, 99, t. 131 (1797).

Brexia is a small genus of some half dozen species confined to Madagascar and the neighbouring islands. It is usually referred to *Saxifragaceae*, and in Engler u. Prantl (Natürl. Pflanzenfam. 2 Aufl.

XVIII A, 185 : 1930) is the type genus of the subfamily and tribal names *Brexioideae* and *Brexieae*. Some authors have made it the type genus of a distinct family, *Brexiaceae* (Baillon in *Adansonia*, VI, 15 : 1865). No recent authors have adopted *Venana*, and in view of its wide usage the name *Brexia* is proposed for conservation.

9439 (Compos.) **Didelta** *L'Héritier*, *Stirp. Nov. fasc. III*, 55, t. 28 (1785 on the title page, but April 1786 according to Britten and Woodward in *Journ. Bot.* XLIII, 268 : 1905). Type-species : *D. tetragonifolia* L'Hérit. (= *D. carnosa* (L. f.) Ait.).

Nomen rejiciendum : *Breteuillia* Buc'hoz, *Grand Jard. Univ.* t. 62 (1785).

Breteuillia is validated by a plate, with dissections, of *B. trianensis* Buc'hoz. The generic name has not been taken up by later authors and is rarely cited in synonymy. *Didelta* has been accepted by Harvey (*Fl. Cap.* III, 510 : 1865 ; *Gen. S. Afr. Pl. ed.* 2, 205 : 1868), Bentham and Hooker (*Gen. Pl.* II, 461 : 1873), O. Hoffmann (in Engler & Prantl, *Natürl. Pflanzenfam.* IV, Abt. 5, 311 : 1892), Thonner (*Fl. Pl. Afr.* 551 : 1915), Phillips (*Gen. S. Afr. Fl. Pl.* 679 : 1926) and other workers on the South African flora, and is a well-marked genus of 2-3 species. The specific epithets in *Didelta* date from 1781 and Buc'hoz's epithet *trianensis* will not in any case be adopted. *Breteuillia* is an excellent example of a name which has entirely dropped out of botanical literature, and the conservation of *Didelta* is therefore proposed.

(b) NAMES INVALIDATED BY EARLIER HOMONYMS.

6208 (Ericac.) **Pernettya** *Gaudichaud* apud Mirbeau in *Ann. Sci. Nat.* V, 102 (1825), as "*Pernetitia*"; *Voy. Freyc. Bot.* 454, t. 67 (1826) as "*Pernettya*;"—non *Pernettya* Scop. *Introd.* 150 (1777), "*Pernettya*" in indice. Type-species : *P. empetrifolia* (Lam.) Gaudich. (= *P. pumila* (L. f.) Hook.).

Pernettya Scop. is an illegitimate name for *Canarina* L. (*Campanulaceae*).

Pernettya *Gaudichaud* (*Ericaceae*) is the name of a well-known genus of evergreen subshrubs. Several species are widely cultivated and some 72 illustrations are quoted in *Index Londinensis*. The genus has recently been revised under this name (Sleumer in *Notizblatt Bot. Gart. Berlin*, XII, 626 : 1936), and no other is available. The spelling "*Pernetitia*" in Mirbeau's paper is probably a mistake, and was corrected to *Pernettya* by Gaudichaud himself in the following year. *Pernettya* *Gaudichaud* is therefore unhesitatingly proposed for conservation.

7800 (Gesneriac.) **Ramonda** *Richard* apud Persoon, *Syn.* I, 216 (1805)—non *Ramonda* Mirbel in *Bull. Soc. Philom.* II, n. 47, 179 (1801). Type-species : *R. pyrenaica* Rich. (= *R. Myconi* (L.) Reichb.).

Nomen rejiciendum : *Chaixia* Lapeyr. *Hist. Abrég. Pl. Pyrén.* Suppl. 38 (1818).

Ramonda Mirbel is an illegitimate name for two species of *Lygodium* Sw. (*Filices*)—Cf. Christensen, Ind. Fil. III, 611 (1906).

Ramonda Rich. (more often spelt *Ramondia*) is a well-known genus of *Gesneriaceae*, which, though only consisting of some 3 species, is frequently cited in phytogeographical discussion, being one of the best examples of a tertiary relict in the flora of the Pyrenees and Balkan Peninsula. It is also widely cultivated as a rock-garden plant and is the type genus of the tribal name *Ramondieae*. Lapeyrouse (Hist. Abr. Pl. Pyr. Suppl. 38 : 1818) was aware that both *Ramonda* Rich. and *Myconia* Lapeyr. (a name he had previously given this genus) were later homonyms and therefore proposed the new name *Chaixia* for the genus. *Chaixia*, however, was not adopted by other authors until a recent paper by O. Schwarz (Fedde, Rep. Sp. Nov. XLVI, 187 : 1939).

Ramonda Rich. has been used consistently by European botanists, including Grenier & Godron (Fl. Franc. II, 507 : 1850—the type genus of a new family name *Ramondiaceae*) ; Willkomm & Lange (Prodr. Fl. Hispan. II, 536 : 1870) ; Bentham & Hooker (Gen. Pl. II, pt. 2, 1024 : 1876) ; Nyman (Consp. Fl. Eur. 503 : 1881) ; Engler & Prantl (Natürl. Pflanzenfam. IV, 3B, 144 : 1893) ; Halácsy (Consp. Fl. Graec. II, 301 : 1902) ; Coste (Fl. Franc. II, 576 : 1903) ; Rouy & Foucaud (Fl. Franc. XI, 193 : 1909) ; Hegi (Ill. Fl. Mitt.-Eur. VI, 176 : 1914) ; Hayek (Prodr. Fl. Pen. Balcan. II, 227 : 1931). Schwarz rejects the idea of conserving *Ramonda* Rich. on the ground that it only includes 3 species and because all the facts were known to Lapeyrouse, who renamed it *Chaixia*. He ignores a resolution adopted at the last International Congress at Amsterdam (Proc. I, 361) which lays down that, directly the name of a well-known genus is found to be endangered, the case must be submitted to the Special Committee.

Schwarz has, therefore, attempted to prejudge the issue by adopting *Chaixia*, and has, I think, judged it wrongly. The importance of this genus in phytogeographic discussion and its familiarity in botanical and horticultural literature seem amply to justify its retention, and the name *Ramonda* Rich. is therefore proposed for addition to the list of *nomina generica conservanda*.

(27) Generic name proposed for conservation by J. R. SEALY.

1208 (*Amaryllidac.*) **Hippeastrum** Herbert, Appendix, 31 (December (?) * 1821). Type-species (Lectotype) : *H. reginae* (L.) Herbert, l.c.

Nomen rejiciendum : *Leopoldia* Herbert in Trans. Hort. Soc. London, IV, 181 (Jan. 29–Feb. 1821).

The generic name *Hippeastrum* was proposed for conservation in Kew Bull. 1939, p. 67, the grounds for the proposal being :

(1) The genus consists of about seventy species, many of them well-known in cultivation.

* The date was *probably* December, but it was *certainly* after May 1st.

(2) The name *Hippeastrum* has been in general use for the genus from 1821 to the present day, during which time it has been adopted in all monographic and floristic works, a selection of which follows :

Herbert, Appendix (1821) ; Herbert, Amaryllidaceae (1837) ; Kunth, Enum. V. (1850) ; Baker in Journ. Bot. XVI. (1878) ; Hemsley, Biol. Centr.-Amer. Bot. III. (1882-86) ; Benth. & Hook. f., Gen. Pl. III. (1883) ; Nicholson, Ill. Dict. Gard. (1884-88) ; Baker, Handb. Amaryll. (1888) ; Engler & Prantl, Nat. Pflanzenfam. II. 5 (1888) ; Donnell Smith, Enum. Pl. Guatemal. (1889-1907) ; Philippi, Pl. Nuevas Chil. (1896) ; Dyer, Fl. Trop. Afr. VII. (1898) ; Dalla Torre & Harms, Gen. Siphonog. (1901) ; Urban, Symb. Antill. (1903-1921) ; Rendle, Classif. Flow. Pl. I. (1904) ; Aschers. & Graebn., Syn. III. (1906) ; Pulle, Enum. Vasc. Pl. Surinam (1906) ; Boldingh, Fl. Dutch W. Ind. Isl. (1909-14) et Fl. Nederl. W. Ind. Eil. (1913) ; Bailey, Stand. Cycl. Hort. III. (1915) ; Hauman & Vanderv. Cat. Phanerog. Argent. (1917) ; Britton, Fl. Bermuda (1918) ; Olmsted, Standardized Pl. Names (1923) ; Bailey, Man. Cult. Pl. (1924) ; Rendle, Classif. Fl. Pl. ed. 2, I. (1930) ; Engler, Nat. Pflanzenfam. Ed. 2, XVa. 415 (1930) ; Small, Man. Southeast. Fl. (1933) ; Hutchinson, Fam. Flow. Pl. II. (1934) ; Macbride, Fl. Peru (1936) ; Standley, Fl. Costa Rica (1937).

Since 1837 it has been used in practically all botanical and horticultural literature, and nearly all the illustrations of the genus that have appeared since that year will be found under *Hippeastrum*.*

(3) The name *Leopoldia* Herbert has never been used for the genus. In those works (almost all before 1837) where the name *Hippeastrum* was not used, the species were included under *Amaryllis*.

No type was indicated by Herbert and no lectotype has been chosen hitherto so far as can be ascertained. *H. reginae* (L.) Herb. is the only species of *Hippeastrum* definitely named by Linnaeus, and agrees well with Herbert's original description.

(28) Generic name proposed for conservation by W. T. STEARN.

1028 (Liliac.) **Apicra** Haworth, Suppl. Pl. Succ. 61 (1819)—non *Apicra* Willdenow in Ges. Naturf. Freund. Berlin, Mag. V. 271 (1811). Suggested lectotype : *A. pentagona* (Haw.) Haw.

The name "*Apicra* Willd." has been adopted by Haworth, Suppl. Pl. Succ. 61 (1819), Baker in Journ. Linn. Soc., Bot. XVIII, 216 (1880), Bentham & Hooker, Gen. Pl. III, 776 (1883), Engler & Prantl, Nat. Pflanzenfam. II. 5, p. 46 (1887), Baker in Fl. Cap. VI, 329 (1896), A. Berger in Engler, Pflanzenreich IV. 38, III. ii (33, Liliac.-Asphodel.-Aloin.) 115 (1908), Trelease in L. H. Bailey, Stand. Cycl. Hort. I, 309 (1914), Marloth, Fl. S. Afr. IV, 87 (1915), K. Krause in Engler & Prantl, Nat. Pflanzenfam. 2nd ed., XVA. 301

* The Index Londinensis lists 87 illustrations under this name.

(1930), Hutchinson, *Fam. Fl. Pl.* II, 91 (1934), Stearn in *Cactus Journ.* VII, 39 (1938), L. Cutak in *Bull. Missouri Bot. Gard.* XXVII, 114 (1939), for a South African genus of Liliaceae distinguished from *Haworthia* Duval by its regular instead of bilabiate perianth. Both genera at one time formed part of *Aloë*. *Haworthia* was separated from *Aloë* by Duval in 1809, *Apicra* by Haworth in 1819. Haworth attributed the name *Apicra* to Willdenow but, as his definition of *Apicra* indicates, and as he himself definitely stated in his *Suppl. Pl. Succ.* 50 (1819), *Revis. Pl. Succ.* 45 (1821) and *Phil. Mag.* n.s. II, 34 (1827), he never saw the original description of *Apicra* Willd. in *Ges. Naturf. Freund. Berlin, Mag.* V. (1811). This explains Haworth's misapplication of the name. Reference to Willdenow's paper shows that Willdenow separated his *Apicra* from *Aloë* on account of its irregular, bilabiate perianth. Witness his diagnosis: "Corolla monopetala . . . limbo sexpartito bilabiato, laciniis tribus superioribus, totidemque inferioribus, concavis revolutis Diese Gattung ist durch den besondern Bau der Blumenkrone von den eigentlichen *Aloë* Arten beim ersten Blick zu unterscheiden" (Willdenow, 1811). That is the very character by which Duval in 1809 had defined his *Haworthia*: "Calyx petaloideus, rectus, superne revolutus in duo labia" (Duval, 1809). Moreover Duval's nine species of *Haworthia* are among twenty-eight species included by Willdenow in his *Apicra*. Thus, as A. J. A. Uitewaal has pointed out in *Cactussen en Vetplanten*, II, 90 (1936), *Apicra* Willd. (1811) is a synonym of *Haworthia* Duval (1809). In defining *Apicra* as a genus with a regular perianth unlike *Haworthia*, Haworth was really founding a new genus. For this genus, which comprises about 12 species and is well known to South African botanists and to growers of succulent plants both in Europe and America, the name *Apicra* has been in continuous use since 1880. No alternative name exists. *Apicra* Haw. is accordingly here proposed for conservation.

On account probably of a general resemblance in vegetative growth to his twenty-two species with irregular perianth, Willdenow erroneously included *Aloë pentagona* Haw. (together with five other then little-known species now referred to *Apicra* Haw., their perianth being regular) in the genus *Apicra* Willd. This species, which is well figured in *Bot. Mag.* t. 1338 (1810) and *Salm-Dyck, Mon. Gen. Aloes*, §1 t. 4 (1837), has, however, a regular perianth. When placed under *Apicra* Haw. it is cited as *Apicra pentagona* (Haw.) Haw. because (1) the generic name *Apicra* Willd. is here proposed for rejection and cannot be adopted in a specific combination, (2) the species does not belong to the genus *Apicra* Willd. as defined by Willdenow. The name *Apicra pentagona* (Haw.) Haw. (1819) can be used for this species since it is not a later homonym of *A. pentagona* (Haw.) Willd. (1811), both being based on the same type, *Aloë pentagona* Haw. (1804).

Analysis of binary combinations published under *Anonymos* by Walter, Fl. Carol. (1788). T. A. SPRAGUE.

5. ANONYMOS Walt. Fl. Carol. 2, 60 (1788)=*Tubiflora* J. F. Gmel. Syst. Nat. II, 19, 27 (1791)=*Elytraria* L. C. Rich. (1803), nom. conserv.

A. caroliniensis Walt. l.c. 60=*Tubiflora caroliniensis* J. F. Gmel. l.c. 27=*Elytraria caroliniensis* (J. F. Gmel.) Pers.

8. ANONYMOS Walt. l.c. 2, 62=*Globifera* J. F. Gmel. l.c. 19, 32=*Micranthemum* L. C. Rich. (1803), nom. conserv.

A. umbrosa Walt. l.c.=*Globifera umbrosa* J. F. Gmel. l.c. 32=*Micranthemum umbrosum* (J. F. Gmel.) Blake.

21. ANONYMOS Walt. l.c. 4, 67=*Heritiera* J. F. Gmel. l.c. 81, 113, non Ait. (1789)=*Gyrotheca* Salisb. (1812)=*Lachnanthes* Ell. (1816), nom. conserv.

A. tinctoria Walt. l.c. 68=*Heritiera tinctorum* [sic] J. F. Gmel. l.c. 113=*Gyrotheca tinctoria* Salisb.=*Lachnanthes tinctoria* Ell. Bot. S. Carol. 47=*Lachnanthes tinctorum* (J. F. Gmel.), comb. nov.

23. ANONYMOS Walt. l.c. 4, 68=*Vogelia* J. F. Gmel. l.c. 81, 107=*Burmannia* L. (1753).

A. capitata Walt. l.c. 69=*Vogelia capitata* J. F. Gmel. l.c. 107=*Burmannia capitata* (J. F. Gmel.) Mart.

65. ANONYMOS Walt. l.c. 9, 86=*Poiretia* J. F. Gmel. l.c. 213, 263=*Houstonia* L. (1753).

A. erecta Walt. l.c. 86=*Poiretia erecta* J. F. Gmel. l.c. 263=*Houstonia caerulea* L.

A. procumbens Walt. l.c. 86=*Poiretia procumbens* J. F. Gmel. l.c. 263=*Houstonia procumbens* (J. F. Gmel.) Standley.

78. ANONYMOS Walt. l.c. 10, 91=*Batschia* J. F. Gmel. l.c. 292, 315=*Lithospermum* L. (1753).

A. caroliniensis Walt. l.c. 91=*Batschia caroliniensis* J. F. Gmel. l.c. 315=*Lithospermum Gmelini* (Michx.) Hitchc.=*Lithospermum caroliniense* (J. F. Gmel.) MacMill.

90. ANONYMOS Walt. l.c. 11, 98=*Gelsemium* Juss. (1789).

A. sempervirens (L.) Walt. l.c. 98=*Gelsemium sempervirens* (L.) Ait. f.

102. ANONYMOS Walt. l.c. 13, 102=*Kuhnistera* Lam. Encycl. III, 370 (1791)=*Petalostemum Michx.* (1803), nom. conserv.

A. pinnata Walt. l.c. 103=*Kuhnistera caroliniensis* Lam. l.c. =*Kuhnistera pinnata* Kuntze (1891)=*Petalostemum pinnatum* (Kuntze) Blake=*Petalostemum caroliniense* (Lam.), comb. nov.

108. ANONYMOS Walt. l.c. 13, 107=*Cynoctonum* J. F. Gmel. l.c. 306, 443 (1791) (*Mitreola* R. Br., 1810).

A. sessilifolia Walt. l.c. 108=*Cynoctonum sessilifolium* J. F. Gmel. l.c. 443.

A. petiolata Walt. l.c. = *Cynoctonum petiolatum* J. F. Gmel. l.c. 443 = **Cynoctonum Mitreola** (L.) Britton.

109. ANONYMOS Walt. l.c. 13, 108 = *Villarsia* J. F. Gmel. l.c. 306, 447 (1791) = *Limnanthemum* S. G. Gmel. (1791) **Nymphoides Hill** (1756).

A. aquatica Walt. l.c. 109 = *Villarsia aquatica* J. F. Gmel. l.c. 447 = *Limnanthemum aquaticum* (J. F. Gmel.) Britton **Nymphoides aquatica** (J. F. Gmel.) Kuntze.

113. ANONYMOS Walt. l.c. 14, 110 = *Demidofia* J. F. Gmel. l.c. 307, 458 (1791) **Dichondra** J. R. et G. Forst. (1776).

A. repens Walt. l.c. 110 = *Demidofia repens* J. F. Gmel. l.c. 458 = **Dichondra repens** J. R. et G. Forst. (1776).

152. ANONYMOS Walt. l.c. 18, 122 = *Uvularia* L. (1753).

A. pudica Walt. l.c. 123 = **Uvularia perfoliata** L. (1753).

161. ANONYMOS Walt. l.c. 19, 127 = *Mattuschkia* J. F. Gmel. l.c. 528, 589 (1791) = **Saururus** L. (1753).

A. aquatica Walt. l.c. 127 = *Mattuschkia aquatica* J. F. Gmel. l.c. 589 = **Saururus cernuus** L. (1753).

176. ANONYMOS Walt. l.c. 22, 136 = *Decodon* J. F. Gmel. l.c. 656, 677 (1791).

A. aquatica Walt. l.c. 137 = *Decodon aquaticus* J. F. Gmel. l.c. 677 = **Decodon verticillatus** (L.) Ell.

181. ANONYMOS Walt. l.c. 23, 139 = **Vaccinium** L. (1753) † **Lyonia Nutt.** (1818), nom. conserv.

A. corymbosa Walt. l.c. 139 = **Vaccinium corymbosum** L. (e descr.).

A. ligustrina Walt. l.c. **Lyonia ligustrina** (L.) DC. (e descr.).

A. frondosa Walt. l.c. **Vaccinium frondosum** L. (e descr.).

230. ANONYMOS Walt. l.c. 31, 160 = **Lippia** L. (1753).

A. repens Walt. l.c. 160 = **Lippia nodiflora** (L.) DC. (e descr.).

240. ANONYMOS Walt. l.c. 32, 163 = *Glandularia* J. F. Gmel. l.c. 886, 920 (1791) = **Verbena** L. (1753).

A. caroliniensis Walt. l.c. 164 = *Glandularia caroliniensis* J. F. Gmel. l.c. 920 = **Verbena canadensis** (L.) Britton.

250. ANONYMOS Walt. l.c. 33, 167 = *Pattersonia* J. F. Gmel. 888, 925 (1791) = **Ruellia** L. (1753).

A. caroliniensis Walt. l.c. 168 = *Pattersonia caroliniensis* J. F. Gmel. l.c. 925 = *Ruellia ciliosa* Pursh (1814) = **Ruellia caroliniensis** (J. F. Gmel.) Steud.

254. ANONYMOS Walt. l.c. 33, 169 = **Gerardia** L. (1753) (*Agalinis* Raf. + *Aureolaria* Raf.).

A. purpurea (L.) Walt. l.c. 170 = **Gerardia purpurea** L. (*Agalinis purpurea* (L.) Pennell).

- A. erecta* Walt. l.c.=**Gerardia erecta** J. F. Gmel. l.c. 928 (*Agalinis erecta* (J. F. Gmel.) Pennell).
- A. setacea* Walt. l.c.=**Gerardia setacea** J. F. Gmel. l.c. (*Agalinis setacea* (J. F. Gmel.) Raf.).
- A. flava* (L.) Walt. l.c.=**Gerardia flava** L. (*Aureolaria flava* (L.) Farwell).
- A. pedicularis* [sic] Walt. l.c.=**Gerardia pedicularia** L. (*Aureolaria pedicularia* (L.) Raf.).
255. ANONYMOS Walt. l.c. 33, 171=*Afzelia* J. F. Gmel. 889, 927 (1791) **Seymeria Pursh** (1814), nom. conserv.
- A. cassioides* Walt. l.c. 171=*Afzelia cassioides* J. F. Gmel. l.c. 927 **Seymeria tenuifolia Pursh** (1814)=**Seymeria cassioides** (J. F. Gmel.) **Blake**.
278. ANONYMOS Walt. l.c. 36, 180=**Crotalaria** L. (1753).
- A. sagittalis* (L.) Walt. l.c. 181=**Grotalaria sagittalis** L. (1753).
- A. rotundifolia* Walt. l.c.=**Crotalaria rotundifolia** J. F. Gmel. l.c. 1095.
279. ANONYMOS Walt. l.c. 36, 181=**Zornia** J. F. Gmel. l.c. 1076, 1096 (1791).
- A. bracteata* Walt. l.c. 181=**Zornia bracteata** J. F. Gmel. l.c. 1096.
288. ANONYMOS Walt. l.c. 37, 186=**Wisteria** Nutt. (1818), nom. conserv.
- A. frutescens* Walt. l.c.=*Glycine frutescens* L.=**Wisteria frutescens** (L.) **Poir**.
294. ANONYMOS Walt. l.c. 38, 188=*Falcata* J. F. Gmel. l.c. 1078, 1131 (1791) = **Amphicarpaea Ell.** (1818), nom. conserv.
- A. caroliniensis* Walt. l.c. 188=*Falcata caroliniana* J. F. Gmel. l.c. 1131=**Amphicarpaea monoica** (L.) **Ell.**
309. ANONYMOS Walt. l.c. 40, 196=*Laciniaria* Hill (1762)=**Liatris Schreb.** (1791), nom. conserv., etc.
- A. pilosa* Walt. l.c. 197=*Chrysocoma pilosa* J. F. Gmel. l.c. 1203 **Liatris pycnostachya Michx.** fide Pursh, Fl. Am. Sept. II, 507 (1814) (non *Liatris pilosa* (Ait.) Willd.).
- A. ciliata* Walt. l.c.=**Liatris pilosa** (Ait.) Willd. fide Pursh, l.c. 508.
- A. graminifolia* Walt. l.c.=**Liatris graminifolia** Willd. Sp. Pl. III, 1636 (1804) (*Laciniaria graminifolia* (Willd.) Kuntze).
- A. ramosa* Walt. l.c. 198=*Chrysocoma ramosa* J. F. Gmel. l.c. 1204=**Liatris aspera Michx.** fide Pursh, l.c. If this identification is correct, a new combination will be required embodying the epithet *ramosa* (J. F. Gmel.).
- A. paniculata* Walt. l.c.=*Chrysocoma paniculata* J. F. Gmel. l.c. =**Liatris paniculata** Michx. Fl. Bor.-Am. II, 93, 1803=*Liatris paniculata* (J. F. Gmel.) Willd. Sp. Pl. III, 1637 (1804)=**Trilisa paniculata** (J. F. Gmel.) **Cass.**

A. uniflora Walt. l.c.=*Chrysocoma uniflora* J. F. Gmel. l.c.=*Liatris bellidifolia* Michx. fide Pursh, l.c. 510=**Carphephorus bellidifolius** (Michx.) Torr. et Gray. If this identification is correct, a new combination will be required embodying the epithet *uniflora* (J. F. Gmel.).

A. odoratissima Walt. l.c.=*Chrysocoma odoratissima* J. F. Gmel. l.c.=*Liatris odoratissima* (J. F. Gmel.) Willd.=**Trilisa odoratissima** (J. F. Gmel.) Cass.

363. ANONYMOS Walt. l.c. 47, 229=**Planera** J. F. Gmel. l.c. 86, 150 (1791).

A. aquatica Walt. l.c. 230=**Planera aquatica** J. F. Gmel. l.c.

397. ANONYMOS Walt. l.c. 52, 246 =**Dioscorea** L. (1753).

A. quaternata Walt. l.c. 246=**Dioscorea quaternata** J. F. Gmel. l.c. 581.

A. quinata Walt. l.c.=*Dioscorea quinata* J. F. Gmel. l.c. =**Dioscorea villosa** L. fide Pursh, Fl. Am. Sept. I, 251 (1814).

435. ANONYMOS Walt. 58, 263 =**Lycoperdon** Pers.?

A. caroliniensis Walt. l.c. 263=**Lycoperdon** sp.?

XLI—CONTRIBUTIONS TO THE FLORA OF BURMA : XVI.* C. E. C. FISCHER.

The regions in brackets after each species are those from which it has been reported previously.

Illicium manipurens Watt ex King [Winteraceae].

(Manipur).

Bhamo District : Naru Bum, 2400 m., fls. March. *Maung Mya* 5327, "37 ft. high ; stem grey ; fls. white, sweet-scented." Myitkyina District : above Langyaw, 1800 m., *C. W. D. Kermodé* 16693, "fls. pale-yellow" ; Laikam-Humyetaung road, 2150–2500 m., fls. April, *Kermodé* 17095, "fls. yellow-green ; Hpape Pass, 2100 m., *Kermodé* 17179, "shrub or small tree, fls. cream tinged with pink."

Mahonia calamicaulis Spare et Fischer [Berberidaceae].

(Assam).

Myitkyina District ; on ridge East of Hpimaw running up to frontier at Pawseik Bum, 2800–3100 m., fls. April, *Kermodé* 17069, "3–4 ft. tall, common in Rhododendron-Magnolia-Oak evergreen, fls. yellow ; Hpape Pass, 2100 m., *Kermodé* 17174, "2 ft. tall."

Mahonia lomariifolia Tak. [Berberidaceae].

(Yunnan, Formosa).

Myitkyina District ; Laikam, 1800–2150 m., fls. April, *Kermodé* 17087, "Shrub ; fruit green tinged purple." When dry the fruit are darkish-purple and pruinose.

Polyspora axillaris (Roxb. ex Ker-Gawl.) Sweet—*Gordonia axillaris* D. Dietr. [Theaceae].

(S. China).

* Continued from K.B. 1939, 98.

Myitkyina District : 8 miles from Kangfang, fls. Sept., *Naw Mu Pa* 17458, "20 ft. tall, fls. white." Bhamo District : Shangtai Lahpyckha, 2000 m., frt. March, *Maung Nya* 5322, "Stem dark-grey ; young fruit greenish-pink, mature capsule brownish-grey" ; Spur of Shangtai, 1900 m., fls. March, *Maung Mya* 5331, "Stem greyish-white ; evergreen."

Geranium yunnanense *Franch.* [Geraniaceae].

(Yunnan).

Myitkyina District : 8 miles from Hpawte, fls. Aug., *Naw Mu Pa* 17440, 2 ft. high."

Tripterygium Wilfordi *Hook. f.* [Celastraceae].

(Yunnan to Formosa).

Myitkyina District : 4 miles from Kangfang, young frt. July, *Naw Mu Pa* 17437, "Creeper with red fruit."

Prunus campanulata *Max.* [Rosaceae].

(W. China).

Myitkyina District : above Langyaw, 1850 m., fls. end March, *Kermode* 16689, "60-70 ft. high and up to 6 ft. girth, fls. deep cherry-red."

Rubus calycinus *Wall. ex D. Don* [Rosaceae].

(E. Himalayas, China).

Myitkyina District : Lagwi-Htawgaw road, 1850 m., fls. April, *Kermode* 17017, "3-4 in. high, creeping and rooting at intervals, fls. white."

Rubus horridulus *Hook. f.* [Rosaceae].

(Bhutan, W. China).

Myitkyina District : near Panwa Pass, 2150 m., fls. early April, *Kermode* 17141, "Very straggling, almost prostrate, fls. pink."

Rubus lineatus *Reinw. ex Bl.* [Rosaceae].

(Sikkim, China, Java).

Myitkyina District : Langyaw-Lukpyi road, 2150 m., fls. end March, *Kermode* 17117, "4-6 ft. high ; fls. greenish."

Eriobotrya tengyuehensis *W. W. Smith* [Pomaceae].

(Yunnan).

Myitkyina District : near Kangfang, 1500-1650 m., fls. April, *Kermode* 17258, "20 ft. high ; fls. white."

Photinia mollis *Hook. f. var. angustifolia C. E. C. Fischer* var. nov. [Pomaceae] ; a typo foliis anguste elliptico-lanceolatis, marginibus minute dentatis distincta.

A shrub 1.25 m. high. Leaves narrowly elliptic-lanceolate, acute or acuminate, base tapering, 6-12 cm. long, 1-2.2 cm. wide, margins minutely and rather distantly toothed, both surfaces densely white-tomentose when young, the tomentum soon vanishing from the upper surface and eventually from the lower also, midrib slightly

impressed above, prominent, as are the 7–8 lateral nerves below, but not visible till the tomentum has disappeared ; petioles 3–8 mm. long, white-tomentose.

Myitkyina District : Tanpangkha, about 3 miles from Seniku, on rocks beside the stream, 300 m., fls. white, March, *Kermode* 16608.

Saxifraga diversifolia *Wall.* [Saxifragaceae].

(W. Himalaya to Bhutan, W. China).

Myitkyina District : in jungle above Hpawte, fls. Oct., *Naw Mu Pa* 17470.

Saxifraga rufescens *Balf. f.* [Saxifragaceae].

(Yunnan).

Myitkyina District : 7 miles from Hpawte, on rocks, fls. white, Aug., *Naw Mu Pa* 17441.

Deutzia Hookeriana (*Schneid.*) *Airy-Shaw* [Hydrangeaceae].

(E. Himalayas, N. Burma, Yunnan—entered here as no precise locality in Burma was specified).

Myitkyina District : 2 miles from Hpawte, fls. white, May, *Naw Mu Pa* 17408, “ Shrub 6 ft. high.”

Hydrangea aspera *D. Don* [Hydrangeaceae].

(Kumaon to Sikkim, W. China).

Myitkyina District : 3 miles from Kangfang, frt. Sept., *Naw Mu Pa* 17466, “ Shrub 6 ft. high.”

Rhododendron eriogynum *Balf. f. et W. W. Smith* [Ericaceae].

(Yunnan).

Myitkyina District : 4 miles from Hpawte, fls. July, *Naw Mu Pa* 17426, “ 10 ft. high ; fls. red.”

Lysimachia trichopoda *Franch.* [Primulaceae].

(Yunnan).

Myitkyina District : 2 miles from Kangfang, on rocks, fls. end May, *Naw Mu Pa* 17413. One flower had 7 sepals and 7 petals.

Hackelia uncinata (*Benth.*) *C. E. C. Fischer* [Boraginaceae].

(Kashmir to Assam).

Myitkyina District : 6 miles from Hpawte, fls. June, *Naw Mu Pa* 17419.

Strobilanthes aenobarba *W. W. Smith* [Acanthaceae].

(S. E. Tibet).

Myitkyina District : above Hpawte, fls. Aug., *Naw Mu Pa* 17445, “ 2 ft. high ; fls. purple.”

Strobilanthes Wallichii *Nees* [Acanthaceae].

(Nepal to Bhutan).

Myitkyina District : 8 miles from Hpawte, fls. July, *Naw Mu Pa* 17427, “ 3 ft. high.”

Luzula effusa Buchen. [Juncaceae].

(Sikkim, W. China).

Myitkyina District: Fengshuiling Pass, 2850 m., fls. April, Kermodé 17226.

XLII—ACTINOCHEITA. A. A. BULLOCK.

Dr. F. A. Barkley(1) has published a further article, in conjunction with Mr. Merton J. Reed, on *Actinocheita*, in which he still maintains that *Rhus filicina* DC. is conspecific with *Actinocheita potentillifolia* (Turcz.) Bullock. Detailed reasons for the rejection of this conclusion have already been given by the writer(2), but the following dogmatic sentence from Dr. Barkley's second paper cannot be allowed to pass without comment: "One cannot but wonder that anyone might seriously suggest either that the description (even excluding the reference to the fruit) or illustration as referring [sic] to *Bursera bipinnata* when compared to a series of specimens of that species."

(1) Messrs. Barkley and Reed do not seem to be fully acquainted with the history(3) of the Mociño and Sessé specimens and drawings. They state that De Candolle "had seen the specimen" (of *Rhus filicina*). Sessé and Mociño's herbarium specimens, however, were sent to Spain, and when Mociño took asylum in Montpellier in 1813, he took with him only the manuscripts and the coloured drawings. It was on these drawings that the new Sessé and Mociño species published in the *Prodromus* were based, as is clear from the following extract from the preface to Alphonse De Candolle's 'Calques des dessins'(4): "Les botanistes qui font usage du *Prodromus*, en particulier ceux qui s'occupent des plantes du Mexique, ont sans doute remarqué combien il leur est difficile de reconnaître les espèces décrites d'après les *Icones florae mexicanæ ineditæ*." "On ne savait pas alors à quel point il est nécessaire de décrire les espèces nouvelles complètement au moyen d'échantillons qui restent dans les herbiers pour de futures explications ou vérifications." "à mesure que le *Prodromus* a avancé, l'emploi des dessins du Mexique est devenu de plus en plus rare." "Vers la fin du *Prodromus* les auteurs n'ont jamais employé ni même consulté ces dessins que les plantes sèches, recueillies dans les temps modernes, remplacent avec infirmité d'avantage."

As De Candolle had *not* seen a specimen of *Rhus filicina*, his statement, that it had imparipinnate leaves with pinnatifid leaflets, was based by him on examination of the drawing, and is not first-hand evidence as Barkley and Reed suppose.

(2) The statement that *Bursera bipinnata* has "a slender glabrous branch bearing bipinnate leaves with more or less alate rachi [sic], with leaflets remote and very sparsely pilose" suggests imperfect acquaintance with that species. The apical portions of the branchlets of *B. bipinnata* are frequently very pilose. The

uppermost part of the leaf is simply pinnate as depicted in De Candolle's copy of Sessé and Mociño's drawing. The leaflets are not "remote," indeed they very often touch or overlap at the middle, triangular spaces being left between their bases exactly as shown in the tracing (Calques, t. 189).

(3) The following sentence from Messrs. Barkley and Reed's paper shows confusion of ideas.—"While the author had in mind the biological entity including *Rhus potentillaefolia* Turcz. in the creation of the genus *Actinocheita*; it is necessary to point out that the type of the genotype is plate 189 of A. De Candolle's Calque[s] des Dessins . . . (not specimens of *Rhus potentillaefolia* Turcz. as has been erroneously assumed) so that if plate 189 of the Calque[s] . . . were to be proven other than conspecific with *Rhus potentillaefolia* . . . then the type of the genus would have been removed, so that it would seem a new name for the genus would have then been indicated rather than a new combination under the old genus name."

The type-method in botanical nomenclature is concerned with types of names, not with morphological (or other) types of groups, which fall under taxonomy. The expression "type of the genotype" (of *Actinocheita*) is equivalent to "type of the type-species of the generic name *Actinocheita*," i.e., a taxonomic, not a nomenclatural concept. A generic name is based on one or more species, which may or may not have been correctly identified. Dr. Barkley's generic description of *Actinocheita* appears to have been drawn up from a number of herbarium specimens. His description of the ovary and fruit could not have been taken from pl. 189 of the *Calques des Dessins*, since the details given by him are not shown in it. It follows, therefore, that the type of the generic name (genotype) is the species represented by the specimens concerned and, as admitted by Dr. Barkley, this is undoubtedly *Rhus potentillifolia* Turcz. Dr. Barkley's adoption of the epithet *filicina* depends upon his identification of *Rhus filicina* DC. with *Rh. potentillifolia* Turcz., an identification which he admits is doubtful and with which Engler, Hemsley and Bullock disagree. The undisputed fact that Calq. Dess. Fl. Mex. t.189 is the type of the specific names *Rhus filicina* DC. and *Actinocheita filicina* (DC.) Barkley, does not make that drawing the type of the generic name *Actinocheita*. The type of a generic name is a species, not a specific name.

Regulations for determining types have not yet appeared, but most botanists would perhaps agree that the description of a group is very important in fixing the type of the name concerned. The description of *Actinocheita* applies in all respects to *Rhus potentillifolia*. Some weight may also be given to the origin of the name *Actinocheita* in fixing its application. It was derived (5) from "the ray-like pilosity of the fruit-coat," characteristic of *Rhus potentillifolia*. Why it should be thought necessary to find a new name for a genus merely because the author of the generic name used an

erroneous specific epithet for the type-species is difficult to understand.

REFERENCES.

- (1) BARKLEY and REED, "Actinocheita," in *Amer. Midl. Nat.* **21**, 368-377 (1939).
- (2) BULLOCK, "On the identification of *Rhus filicina* Sessé et Moc. ex DC." in *Kew Bull.* 1937, 440-441.
- (3) SPRAGUE, "Sessé and Mociño's Plantae Novae Hispaniae and Flora Mexicana," in *Kew Bull.* 1926, 417-425, with bibliography.
- (4) ALPH. DE CANDOLLE, "Calques des Dessins de la Flore du Mexique, de Mociño et Sessé," introduction and plate 189 (1874).
- (5) BARKLEY, "A new genus of Anacardiaceae," in *Ann. Missouri Bot. Gard.* **24**, 1-10 (1937).

XLIII—MISCELLANEOUS NOTES.

Miss E. A. Bruce.—MISS E. A. BRUCE, B.Sc., has been appointed Temporary Assistant Botanist to fill the vacancy caused by the death of the late Dr. E. G. S. Brown.

ARTHUR T. BOSCAWEN.—Kew mourns the loss of an old and valued correspondent and friend in the death of Canon A. T. Boscawen, Rector of Ludgvan, Cornwall, on 17th July, 1939.

The Rectory garden with its kindly owner was the Mecca to which many botanists and horticulturists turned when they wished to see new and unexpected plants, especially from New Zealand, flourishing under the skill and care of the Rector in the genial climate of S. Cornwall. Not only was the Canon a keen gardener, but he was also greatly interested in larger horticultural enterprises, for it was due to him that the cultivation of the *Anemone* was taken up in Cornwall, and he also played a prominent part in establishing the Broccoli industry in the county, both of which undertakings have been of great benefit to consumers and growers alike.

At Kew, however, we think of Arthur Boscawen's garden at Ludgvan as the place to which rare plants needing expert care and a favourable situation should be sent for trial. Among his many New Zealand plants *Nothopanax arborescens* was figured in the Botanical Magazine, t.9280 (1932). The results he achieved amply showed that our confidence in the Rector's skill was not misplaced. He always enjoyed visits from his horticultural friends to whom he delighted to show his treasures.

Botanical Magazine.—The first part of volume 162 was published on July 8th, and contains the following plant portraits: *Nomocharis Farreri* (Evans) Harrow (t.9557), a member of the section *Eunomocharis* Balf. f. which comes from N. E. Upper Burma and possibly extends to Yunnan; a long account accompanies the

plate, together with a key to the allied species; *Schima argentea* Pritzl apud Diels (t.9558), a member of the family *Theaceae* found in open thickets and forests on hillsides in Assam, S. W. China and N. Siam; *Lithospermum oleifolium* Lapeyrouse (t.9559), a native of Catalonia, which has previously been figured, but has been figured again since the present plant differs considerably in the flowers, this being a case of heterostyly in which the difference in length of style is accompanied by differences in calyx and corolla as well as in the stamens; *Fritillaria citrina* Baker (t.9560), from S. Asia Minor; *Rhododendron ravum* Balf. f. et W. W. Sm. (t.9561), from Yunnan; *Cyananthus macrocalyx* Franchet (t.9562), collected by George Forrest in N. W. Yunnan, occurring also in E. Tibet and Szechwan; *Ptychogyne flexuosa* (Rolfe) Pfitzer (t.9563), a beautiful white-flowered orchid belonging to the *Coelogyninae* from the Dutch East Indies; *Buddleja Fallowiana* Balf. f. et W. W. Sm. (t.9564), a native of Yunnan; *Vitis Piasezkii* Maxim. (t.9565), distributed in northern and central China; *Chrysanthemum rubellum* Sealy (t.9566), an interesting species, formerly called *C. erubescens* and known only in cultivation; and *Jasminum dispernum* Wall. (t.9567), widely distributed in N. India from Chamba to Bhutan and Assam and in S. W. China.

Uganda Timber Trees.*—This work represents number four of "Forest Trees and Timbers of the British Empire," previous parts of which have already been noticed (K.B. 1932, 256; 1934, 140; and 1935, 588). It has been written along similar lines to part three, but many of the timbers which have been described are more familiar in Great Britain than some of those in previous numbers. They include various members of the *Meliaceae* such as the species of *Entandrophragma* and *Khaya* which yield the African mahoganies, iroko (*Chlorophora excelsa* (Welw.) Benth. & Hook. f.), and the African blackwood (*Dalbergia melanoxylon* Guill. & Perr.). The high standard of the anatomical descriptions has been well maintained. A feature which will be particularly welcomed by wood anatomists is the summaries of the anatomical differences between those species of *Khaya* and *Entandrophragma* which have been described. The authors have included information derived from published and unpublished results of physical tests which have been applied to many of the timbers at the Forest Products Research Laboratory, Princes Risborough. The Editors state that the first four parts of this work are of a convenient size for binding into one volume, for which reason an index to all of them has been included. Two appendices are included, one on cell dimensions and the other on the distribution of forests in Uganda. C. R. METCALFE.

* "Fifteen Uganda Timbers," by W. J. Eggeling and C. M. Harris, in collaboration with the Imperial Forestry Institute, Oxford. Oxford, at the Clarendon Press, 1939. Pp. 120. Plates 16, figs. 15. Price 7s. 6d.

Printed under the authority of HIS MAJESTY'S STATIONERY OFFICE,
By the South Essex Recorders, Ltd., Ilford.

(1957) Wt. 18/32 800 9/39 S.E.R. Ltd. Gp. 381.